Aquatic Invasive Species

funded by the Great Lakes Restoration Initiative

Progress toward restoring the Great Lakes has been significantly undermined by the effects of non-native aquatic, wetland, and terrestrial invasive species. More than 180 nonindigenous aquatic species (NAS) now exist in the Great Lakes. The most invasive of these - including the well known zebra mussel - reproduce and spread, ultimately degrading habitat, out-competing native species, and short-circuiting food webs. Without forecasting the arrival and bioeconomic impact of nonindigenous species, natural resource managers cannot cost effectively respond to current invasions or prevent future invasions.

NOAA's Aquatic Invasive Species efforts under the GLRI provide a foundation towards meeting the GLRI goal of developing "A comprehensive program for detection and tracking newly identified invasive species in the Great Lakes and providing up-to-date critical information needed by decision makers for evaluating potential rapid response actions."

Forecasting Risk

With GLRI funding, NOAA-supported investigators at the University of Notre Dame will combine scientific, economic, risk analysis, and management expertise to increase capabilities for forecasting both the ecological and economic impact of current and future species invasions, quantify major uncertainties and ways to reduce uncertainty, and identify actions to improve cost effective management of invasive species in the Great Lakes.

Improving Information Access: GLANSIS

The Great Lakes Aquatic Non-Indigenous Species Information System (GLANSIS) functions as a Great Lakes specific node of the USGS Nonindigenous Aquatic Species national database. GLANSIS provides targeted access to the information – especially collection records – for the Great Lakes region. In creating GLANSIS, NOAA has committed to providing a 'one-stop-shop' for technical information on all nonindigenous species established in the Great Lakes, including maps of the current distributions. GLANSIS currently includes profiles for 184 nonindigenous species that have become established in the Great Lakes. With GLRI funding, GLANSIS will expand its information resources to better serve the needs of natural resource managers. The expanded GLANSIS will include profiles for range expansion species (native to one part of the basin, but invading other parts) and those forecasted at the highest risk for invasion, as well as risk assessment information and public fact sheets supporting citizen monitoring.

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Great Lakes RESTORATION